

CLAIMS

- 1 An array speaker apparatus with projection screen, comprising:
 - a plurality of speaker units;
 - a plurality of cabinets each having an opening portion, and adapted for accommodating each of the plurality of speaker units so that vibration plates of the speaker units are located at an internal side relative to the opening portions; and
 - a projection screen serving as a sound transmission screen, and for displaying a projected image,
 - wherein the plurality of cabinets are arranged so that the opening portions thereof are flush with each other, and
 - the projection screen is attached in a state in contact with the opening portions or close thereto.
- 2 The array speaker apparatus with projection screen as set forth in claim 1,
 - wherein the projection screen is extended and stretched toward the opening portion side of the cabinets in such a manner to all cover plane surfaces having the opening portions of the plurality of cabinets.
- 3 The array speaker apparatus with projection screen as set forth in claim 1,
 - wherein buffer materials are provided at plane surfaces having the opening portions of the cabinets.

4 The array speaker apparatus with projection screen as set forth in claim 3, wherein the projection screen is extended in a state in contact with the buffer materials in such a manner to all cover plane surfaces having the opening portions of the plurality of cabinets.

5 The array speaker apparatus with projection screen as set forth in claim 3, wherein the projection screen is bonded to the buffer materials.

6 The array speaker apparatus with projection screen as set forth in claim 1, wherein the projection screen is bonded to respective plane surfaces having the opening portions.

7 The array speaker apparatus with projection screen as set forth in claim 2, wherein a frame is provided at the peripheries of the arranged plurality of cabinets, and the projection screen is extended and stretched toward the frame.

8 The array speaker apparatus with projection screen as set forth in claim 1, wherein there are included power amplifiers for generating unit drive signals delivered to each of the plurality of speaker units.

9 The array speaker apparatus with projection screen as set forth in claim 6, wherein the power amplifier has a plurality of output channels, and the plurality of speaker units and the plurality of cabinets which correspond to the number of output channels of the power amplifier are integrally formed.

10 The array speaker apparatus with projection screen as set forth in claim 1, which further comprises a directivity formation circuit constituted by a plurality of filter circuits to input an input audio signal to the plurality of filter circuits to deliver outputs of the respective filter circuits to the plurality of speaker units to thereby obtain sound wave having a predetermined directivity.

11 An array speaker apparatus with projection screen, comprising a plurality of speaker modules each including:

a speaker unit;

a cabinet having an opening portion, and adapted for accommodating the speaker unit so that a vibration plate of the speaker unit is located at an internal side relative to the opening portion; and

a projection screen serving as a sound transmission screen for displaying a projected image, and extended and stretched toward the opening portion side of the cabinet in such a manner to cover plane surface having the opening portion of the cabinet,

wherein the array speaker apparatus with projection screen is caused to be of the configuration in which the plurality of speaker modules are arranged so that the projection screens are caused to be flush with each other.